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ABSTRACT

The roles of exit examinations (high school exit) and college entrance examinations in four industrialized countries are described. Information was obtained from reviews of educational systems and interviews with small samples of students (at least seven or eight students), parents, and teachers during 1993. All four countries studied, Japan, Germany, France, and the United Kingdom, are experiencing a common problem in that their universities, built to educate a moderate percentage of the population, are being asked to accommodate increasing numbers of students. They are left with the alternatives of restricting enrollments to make the universities more elitist or expanding enrollments and watering down the value of the university degree. In all of these countries, entrance and exit examinations are based on a curriculum established by ministries of education. These examinations are closely tied to what students have studied in school. Parents and students expressed satisfaction with the examinations overall, although they noted problems with strong reliance on examinations. They were unable, however, to suggest more desirable procedures. Regardless of the approach taken by governments in these four countries, it seems likely that the number of students selecting a vocational track will continue to lag as long as economic and social advantages of a university degree persist. (Contains 25 references.) (SLD)

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International Comparisons of Entrance and Exit Examinations

Japan, United Kingdom, France, and Germany

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International Comparisons of Entrance and Exit Examinations

Japan, United Kingdom, France, and Germany

Harold W. Stevenson and Shin-ying Lee
in collaboration with

Solange Carton
Margaret Evans
Samia Meziane
Naoko Moriyoshi
Ian Schmidt
University of Michigan

U.S. Department of Education
Office of Educational Research and Improvement

U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
Ramon C. Cortines
Acting Assistant Secretary

Office of Reform Assistance and Dissemination
Ron Cartwright
Acting Director

Media and Information Services
Cynthia Hearn Dorfman
Director

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Introduction

One of the most difficult questions facing many contemporary societies is deciding how to allocate their expenditures for education. Should emphasis be placed on primary and secondary schools, or should colleges and universities receive higher levels of support? In a rapidly developing world, where technology and science play increasingly important roles, will a society be in a better competitive position by emphasizing the basic primary and secondary school years, or by expanding the number of students who attain degrees from post secondary institutions?

These decisions occupy a great deal of attention, but even more formidable questions are raised once a decision is reached: How should students be selected for admission to successively more demanding levels of education? If access to colleges is readily available, how can the quality of education be maintained or improved? On the other hand, entrance to colleges and universities becomes highly competitive if the society concentrates its expenditures on education at the elementary and early secondary levels. Because the level of education attained by individuals is a critical variable in determining social and financial status in all industrialized societies, these questions take on important political, social, and economic implications.

The resources provided for education within a society are obviously an important factor influencing the ways in which education is supported. Some societies are rich enough to develop a wide array of institutions for the pursuit of higher learning, thereby making it possible for large percentages of their students to pursue advanced levels of education. Even in these societies, however, some institutions offer more demanding curricula than others. As a result, admission to different institutions requires different qualifications. Other societies, allocating less funding to higher education, are able to admit only a small percentage of the students seeking admission each year. As a result, entrance to colleges and universities in these societies is extremely competitive.

The United States is among the societies that are examining the ways in which higher education can yield the greatest benefit, both for the individual and for society in general. One approach that may be helpful in this self-scrutiny is to find out how other highly industrialized societies handle these problems. What is the structure of higher education in these societies and on what basis are students admitted to colleges and universities? Specifically, what roles do high school exit examinations or college entrance examinations play in determining college admissions? What do students, parents, and teachers think about the usefulness and fairness of these examinations? Are the results of the tests considered to be a reasonable index of the students' knowledge and potential for future success? How could the examinations be improved? Do the tests strongly influence the high school curriculum? Information relevant to these and other questions is provided in this paper, which describes the role of exit and entrance examinations in four of the industrialized countries with leading economies: Japan, the United Kingdom, France, and Germany.

The information presented in this paper was obtained from reviews of the educational systems in the four countries and from interviews held with small samples of students, parents, and teachers during the last three months of 1993. Interviews were held in two locations in each country and the students selected for interviews were in their last year of secondary school and were expecting to apply for admission to some of the best known universities in their country. Attempts were made in each country to interview at least seven or eight students and their parents, and some of their teachers. Because of the small number of respondents and our selection of university-bound students, the results of our interviews may not be indicative of the reaction of the general population to the procedures used for college entrance.

The paper is organized according to each country. A general description of the educational system is followed by an outline of the college entrance requirements. Following this, the results of the interviews are discussed and some typical reactions are presented. Finally, a comparison is made of the apparent strengths and weaknesses revealed by the interviews held in the four countries.

Japan

Elementary and Secondary Education

Education in Japan is compulsory for children between the ages of 6 and 15. These years encompass the six grades of elementary school (*shogakko*) and the three years of junior high school (*chugakko*). There are two major types of high schools (*kotogakko*): academic high schools/ and vocational high schools. Education begins for most Japanese children when they enter kindergarten (*yochien*) or day-care centers (*hoikuen* or *takujisho*), both of which may be private or supported by the government. *Yochien* enroll children from the ages of three to six; *hoikuen* accept even younger children. In 1994, 64 percent of all Japanese first-graders had completed some form of preschool. Preschools affiliated with prestigious universities are often selective, admitting children only after conducting tests and interviews; however, only around 1 percent of the preschools require some form of admissions test (*Kyoiku Deetarando, 1995*).

Every child in Japan is required to attend elementary school, either a public school in the student's residential district, or a private or national school that may be outside the district. This latter type of school is sometimes affiliated with a prestigious private or national university, and children are admitted only after they pass special entry examinations.

It is mandatory for all students to attend three years of junior high school. As is the case with elementary school, individuals may choose to go either to local public schools that automatically accept them, or to competitive schools if they pass the examinations.

Because the three years of high school are not compulsory, everyone who wishes to receive an education in a public high school must take an entrance examination that is administered by each prefecture or city. Entrance examinations to national or private high schools are administered by each high school. In 1994, 95.7 percent of the graduates of junior high schools applied to high school programs, and 95 percent of those were admitted.

Students who fail the examination or who do not qualify for admission to the school they wish to enter may decide to wait another year to retake the test, especially if they are highly motivated to attend a particular high school. Students who do not pass any of the examinations may choose to attend other types of schools.

Approximately three-fourths of the high school students in Japan enrolled in regular courses in 1994. In addition, there is a very elaborate system of alternative schools. Some, which are similar to Western vocational schools, include commercial, industrial, agricultural, home economics, nursing, and marine high schools. Approximately 26 percent of high school students are enrolled in one of these types of high schools.

In addition, there are technical schools (*koto senmon gakko*), special training schools (*senshu gakko*), and miscellaneous schools (*kakushu gakko*), which provide vocational or technical education. Students in the technical schools receive the equivalent of a

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high school education plus two years of specialized classes in areas such as engineering and marine studies on a junior-college level. The special training schools offer *ippan katei* (general courses), *koto katei* (upper secondary courses equivalent to high school), and *senmon katei* (specialized courses in which the students receive the equivalent of a postsecondary level of education or practical training). The broad array of schools falling under the heading of miscellaneous schools offers short-term courses that are equivalent to those of the special training schools, but on a smaller scale. Admission to the upper secondary courses requires the completion of the lower secondary courses, and admission to the postsecondary level courses requires the completion of upper secondary courses.

Much emphasis is placed in Japan upon the prestige of the university from which the person graduates. Because it is important to attend a good high school in order to gain access to a prestigious university, parental concern about the high school entrance-examination process has increased dramatically over the past several decades as entrance to universities has become more competitive. Graduating from high school qualifies a student to take the college-entrance examinations, although it is possible for non-graduates to apply to college if they pass a special qualifying examination. There are no exit examinations at the completion of high school.

Junior Colleges and Universities

Among the 1994 high school graduates, 36 percent were enrolled in some type of college program. Among these students, 40 percent were enrolled in the two-year programs offered by junior colleges. Junior colleges are especially popular with young women, for the programs prepare students for various jobs as well as providing a general education. The remaining 60 percent of the students attending some type of college program were enrolled in four-year colleges.

Individuals who wish to attend junior colleges or universities have to take and pass the entrance examination administered by each college. Certain universities may waive the examination requirement for a select number of students who have attended an affiliated high school. Since entrance examinations are held only once a year (usually from January to March), students who fail the examination must wait until the following year to retake the examinations.

Applying for University Entrance

Competition for admission to the most prestigious Japanese universities is very intense. Part of the reason for the severe competition is that the number of students admitted to college has remained essentially the same over the years, even though the number of applicants has increased dramatically. Universities are not allowed to increase their enrollment without permission from the Ministry of Education (*Monbusho*). In 1993, about half of all males applied to four- year universities. Of these, 36.6 percent were enrolled. Among females, 23.5 percent applied to four-year institutions and 19 percent were actually enrolled.

Before students are allowed to apply to a university, they are expected to have completed the equivalent of a high school education and be at least 18 years of age by the time they enter the university. To meet the first requirement, individuals need to graduate from a high school or an equivalent educational institution, or to pass an annually held University Entrance Center Exam. This test covers the material taught at high school.

Some students who are applying for admission to the nation's top universities may stay at home during part of their senior year or earlier, in order to have the free time they believe is necessary for adequate preparation for the entrance examinations.

Once the two requirements are met, there is an established set of steps that must be followed in applying for university entrance. Students may apply for admission to any number of universities and are limited only by the dates of the examinations and the subjects that are included in the examinations. Some universities may not, for example, offer examinations in the subjects which the student wishes to study. The steps for application vary somewhat depending on whether the student is applying to a public, a national, or a private university.

Public and National Universities

Individuals seeking admission to national or public universities take two sets of examinations. The first set, the Center Examination (*Center shiken*), is administered every January by the National Center for University Entrance Examinations. This examination is given at the same time throughout the country and includes a variety of subjects, such as mathematics, science, history, language arts, humanities, and foreign languages. National universities generally require applicants to be tested on six subjects; private universities usually require three or four. The Center Examination consists of multiple-choice questions.

The correct answers to all the examination questions are listed in the newspaper the day after the test, and students can evaluate their own performance. Based on the total score they receive, students must then decide the universities to which they will apply.

The second set of tests taken by students are the specific entrance examinations constructed for and administered by each university. They are administered on one day, or possibly two days, and each examination lasts from one to three hours. The format for the examinations usually includes multiple-choice questions, questions requiring short answers, long essays, and in some cases, oral responses or interviews. Highly competitive universities will not accept applications for the second examination from students who do not score above a certain level on the first examination. The minimum scores required by various universities are made available to all students.

The total score of the first and second sets of examinations is calculated (the weighting of the scores varies among universities), and acceptance is based nearly exclusively on the score that is obtained. In order to allow students to apply to more than a single university, some universities schedule the second set of examinations on separate days. These schedules allow students opportunities that were impossible in earlier years, when all national universities gave their examinations on the same day.

Private Universities

A number of prestigious private universities also require applicants to take the Center Examinations, but in only three or four subjects. Second examinations are administered by each university, and the total score of the two tests, as well as other qualifications, determines who is accepted. Private universities construct their own examination questions, and students have to prepare themselves for each university's unique orientation.

Alternative Methods

In addition to entrance-examination scores, other avenues are available for admission to both public and private universities. Students may be accepted by a university through the recommendation (*suisen*) system, which currently accounts for nearly 20 percent of the admissions. Japan's universities consider two main types of recommendation: the "Allocated to School" recommendation (*Shiteiko suisen*) and the "Open to Public" recommendation (*Kobo suisen*). In the first type, universities accept a small number of students from certain highly regarded high schools. Because these high schools are well known for their academic excellence, students recommended by the principals of these schools usually get accepted after procedural tests and interviews. If more than the allocated number of students apply for admission through this means, their teachers select the top students on the basis of academic standing, personality, conduct, attendance, extracurricular activities, and leadership. The second type of recommendation is open to all students, but students must find out which universities accept students by public recommendation. They then ask their teachers to recommend them by filling in relevant sections of the college's application form. As with the first system, entrance to these universities depends on more than grades, for other personal attributes also play an important role in the teachers' recommendations.

The recommendation system for admission is especially beneficial for students who do not perform up to their capacity in highly competitive examination settings. They not only are relieved of this competition, but the stress for those who are successful is also reduced by the fact that admissions are announced in the late fall, rather than in the spring after the examinations are given.

Juku

In response to the severe competition for college admission, many children are sent to special tutoring sessions known as *juku*, in order to improve their academic abilities and increase their chances of being admitted to a top university. Many parents believe that the high school curriculum does not adequately prepare students for the rigorous university entrance examinations. This is especially true of parents of students at public high schools, where the curriculum is directly controlled by the Ministry of Education or regional boards of education. The Ministry sets required hours for each subject, making it difficult for teachers to have time to prepare students for the college-entrance examinations. In such cases the teachers often acknowledge the necessity for students to attend *juku* to obtain such preparation.

Attendance at *juku* is widespread but varies greatly, depending on the grade level of the student, the size of the city in which the student lives, and the family's income. In some locations, only a small percentage of the high school students may attend *juku*; in other locations, more than half of the students in the second and third years of high school study academic subjects at *juku*. *Juku* are privately owned and sessions are expensive; entrance fees can cost thousands of dollars and monthly tuition several thousand more.

University Expenses

Attending a Japanese university, especially a private university, can be quite costly. The enrollment fees and tuition at private universities are over four times as high as at public or national universities, where the

enrollment fee is approximately $2,000 and the yearly tuition is approximately $3,600. If the universities to which the students are applying are not in their immediate area, it may cost an additional $1,000 just to make the trips necessary to take the college-entrance examinations.

These high costs have led to concern about the association between successful college entrance and financial support. Without money, choices are limited, for it is impossible for the child to attend *juku* or expensive private schools, or for the family to employ a tutor. There is growing uneasiness therefore, that students of average academic abilities may be admitted to prestigious universities, because they have had access to opportunities and experiences that are especially relevant for doing well on college entrance examinations.

Ronin

Due to the highly competitive nature of college entrance in Japan, many students are not accepted into a university. This has led to the "*ronin* era," a phenomenon of increasing frequency in which students wait to retake the yearly examinations and place other options on hold. Some students give up all aspirations for entering a college or university and seek a job or enroll in special training schools. Others may enroll in special training schools and wait until the university entrance examinations are given the following year, when they can try once more to achieve a passing grade. *Ronin* spend their time preparing for the next round of entrance examinations. It is acceptable for sons to maintain their status as *ronin* for two or more years, especially if they are seeking admission to a leading university, but parents are unlikely to allow their daughters to adopt this role for more than a single year.

Reactions to the College Entrance System

Need for Entering College

Most of the persons interviewed were convinced that it is important for students to achieve a college education. Both parents and teachers indicated that it is not only important to attend a university, but that particular universities offered special advantages. One teacher pointed out that:

> graduates from prestigious universities are guaranteed higher positions and status in our society. They get better jobs, faster promotions, better marriages, and an all-around better life. That is why people aspire to being admitted to those universities.

A few others thought that a college education was not always a necessity. This view was expressed by one of the parents:

> I don't think that a college education is 100 percent necessary: Maybe 50/50. In the present system, even if people graduate from college, they are not prepared for special occupations or skills. People can study by themselves for what is taught at college. I don't think that my son has to go to college straight out of high school. If he knows what he wants to study in college, I would encourage him and welcome such a goal-oriented attitude.

General Satisfaction

The teachers who were interviewed were satisfied with some aspects of the overall college-admission process. They commented favorably about the confidentiality of the examination questions and the way they were marked. They also agreed that students who study hard and do well on the examinations

have excellent chances of getting into a university. Some teachers, however, complained about the types of questions that appear on the examinations. They questioned the usefulness of paper-and-pencil tests. These tests, they suggested, required students to rely too much on memory and too little upon the ability to apply this information to the solution of meaningful problems. A similar attitude was expressed by one of the students:It only seems to assess techniques for taking exams. As for science subjects, weshould value the process of self-discovery and self-learning. I feel that I am being tested only on accumulated knowledge.

Teachers also had serious concerns about the recommendation system. This system was designed to benefit high school students who have studied hard but who, for one reason or another, are not good at taking entrance examinations. Currently, however, many of the students seeking admission by recommendation simply want to get into college earlier, with the result that students who would have benefited from the recommendation system are losing their chances. One of the teachers complained:

> Students adopt the strategy of aiming for a recommendation from the time they begin high school. The high school experience becomes simply a means of gaining the recommendation.

Most of the teachers suggested that Japan adopt a system that makes it easier to be admitted to college but harder to graduate. This, they proposed, would lessen the fierce competition for university entrance while strengthening the incentive within each student to study hard to graduate from college. Such a change would be in response to the common charge in Japan that the college years are a time of relaxation between the arduous high school years and those following college when students will enter the labor force and once again will be faced with intense competition. One of the teachers explained it this way:

> I think it would be better if the students could get in their desired colleges, but that it would be more difficult to graduate. Japanese teachers tend to be lenient and merciful to slow-learning students and it is difficult for them to give a failing grade to those students. We should establish an organization that administers a university graduation qualification test. Students who don't pass the test would not be allowed to graduate.

Most mothers who were interviewed accepted the present college-entrance system with few questions. Their main concern was for their children to pass the examinations and to be accepted into a university, and few were critical of the procedures that currently exist. They considered the entrance examinations to be a necessary screening device, rather than as a means for assessing the fitness of applicants to each university. In their view, the present system might be subject to criticism, but the necessity of using some type of selection device due to the limited capacity of each university seemed to be well accepted.

This was not always the case, however. Some parents worried that the demands of the entrance examination were changing the characteristics of Japanese students. Because students spend so much time preparing for entrance examinations, the parents were concerned that they were reducing the amount of time spent in group activities. Team play in the minds of these parents is essential, and "Learning oriented toward the individual does not foster an ability to cooperate with others." It is in this way, they

said, that the present examination system is changing the lives of Japanese students.

Parents were also highly critical of the university system as it exists in Japan and wondered whether profound changes in college curricula and admissions standards might not be needed. One of the fathers expressed these criticisms:

> I wish the college education would foster an ability the student already possesses and that students could graduate with a feeling of accomplishment. They should teach practical skills and knowledge, things that are useful in the real world. It seems that the Japanese college education is a waste of money and input. Students' academic levels may well be higher at the time of entry than that of the graduates. Graduates of Japanese universities cannot make use of their college education in their occupations.

Fairness

Students' responses to the fairness of the system varied. One said that "it is fair because if we study hard, we can get into college, although the once-a-year chance might be a problem." Another felt that:

> competition is a natural outcome of the fact that there is an excess in the demand for college entrance. In the real world, competition often involves more than the individual's abilities and talented persons may not always get promoted or acknowledged. In that sense, the exam system is fair since entrance is determined solely on the basis of academic achievement.

Some teachers criticized the multiple-choice nature of the Center Examinations because they could lead to scores that might be unduly high or low because of luck or guessing. They appeared to be satisfied with the scoring and the reasonableness of the Center Examinations, but were not satisfied with the fact that the second set of examinations also stresses skill-oriented learning that often relies heavily on memorization. They were aware of the efforts being made to improve the system, and seemed to believe that the present examination system, despite its shortcomings, is acceptable.

More than half of the mothers interviewed said they had not given any consideration to the fairness of the present examination system. One of the questions they raised dealt with the validity of requiring the mastery of a large amount of information. "The examinations," said one of the mothers, "should select those students who will benefit most from college education rather than those who score well on memorization tests." In general, however, the mothers expressed very few criticisms. This may be due in part to the relatively passive role played by parents in the college-entrance process. In most cases, students decide their own academic courses and make their own choices about the examinations they will take.

Some students thought the examination system was fair and acceptable; others pointed out its shortcomings, especially those concerning the inability of the present format of the examination to evaluate relevant personal characteristics.

> There can be no perfect system. I understand that some shortcomings would always exist. But if possible, I would like to see an improvement in the selection process so that personal characteristics would be given more consideration, rather than simply relying only on academic achievement.

Some students commented on the content of the exams: "If someone is not good at one of the subjects and fails that test, he cannot get in regardless of his hard work." Another of the students suggested:

> I would not say that the present entrance exam system is a fair one. Students cannot express their passion about a subject, their high motivation to enter a college, to exam administrators. Nor does the test assess the individual's knowledge in his or her special field of interest.

The increasing role of *juku* was also criticized, primarily because attendance at *juku* gives special advantage to students whose families can afford to pay the high tuition. *Juku* are expensive and many families do not have the funds necessary for tuition; thus children in these families do not have the same opportunities for passing the entrance examinations as the well-drilled students from more affluent families.

In general, all interviewees (teachers, parents, and students) felt that the present entrance examinations are functioning as screening devices. The nature of the present selection process raised some concerns, but the necessity of having such screening due to the limited capacity of each university seems to be well accepted.

Factors Associated With Success

Teachers associated successful college admission with several factors. Some emphasized students' skills and achievements based on daily efforts and the ability to compete well. Others mentioned confidence and mental factors, such as the ability to stay calm and relaxed during the examinations. In general, most agreed with the teacher who said that "those who have developed positive attitudes toward studying and who do not give up easily on difficult problems are likely to foster confidence within themselves and succeed on the exams." One teacher emphasized:

> It is important not to be extremely bad at one subject and to be good at one subject, preferably math, as it is relatively easier to score higher and differentiate themselves from others on the math test. Of course, hard work is necessary. However, I think I can see during the last year of high school that those who are born with talent naturally excel others. As a teacher, I should not be saying this, but I can't deny that inborn ability also plays an important role in determining success.

Mothers believed that effort was an important predictor of success: "Without hard study, no luck works. Overnight cramming is not enough." The importance of mental factors, especially the ability to keep one's composure, were also mentioned. One mother described her feelings in the following way:

> To maintain composure, we should be prepared for every situation. If the weather turns out to be bad, resulting in a traffic problem, we should reserve a hotel room near the university. If students are late for an exam, it is going to make the students even more nervous. As a parent, I want my child to be in the exam room with enough time and minimum worry.

Students suggested effort, luck, and physical and mental conditions on the day of the examination as factors associated with success. Students also commented that the economic or family situation had an indirect effect on successful college admission. One stated:

> Individuals who have grown up in an environment of educational stimuli and opportunities would naturally consider going to college. To enter a prestigious college, I have to go to a good high school and junior high school. Then to go to a good junior high, preparation must begin during the days of elementary school.

Stressfulness of the Examinations

Most of the teachers, parents, and students who were interviewed seemed to view stress as an inevitable part of the college-admission process. Stress is a natural consequence, they seemed to believe, of the competition faced by students, the pressure the students feel in trying to meet parental and self-expectations, and the fact that graduating from certain universities greatly determines the course of their future lives. Some felt that the stress level could be lowered by applying to less prestigious universities or by accepting the *ronin* life to study for another year. Students did not dwell on the stress factor. As one student said, "We might be stressed. But we can't feel it. If we feel we are stressed, that's it. We have no room left to feel stress."

Role of Schools and Teachers

Some schools, usually private schools and top urban public schools, prepare students for college entrance examinations by occasionally giving practice examinations and by providing extracurricular classes to help students make up or review particular subjects. In addition, high schools have guidance rooms for advising students about future courses in which they might enroll. Teachers are available as a source of information for students, although most students seem to know what they need to do and only occasionally talk to their teachers about the college-admission process. In addition, every class has a homeroom teacher who is responsible for guiding and taking care of the whole class. The 12th-grade teachers also help students prepare for the examinations by providing them with information in their specific subject areas. To provide further assistance, teachers schedule a meeting each semester with students and their mothers. At this meeting they give out the report card and advise the student about his or her selection of courses. Teachers also arrange for programs in which all 12th-grade students and their parents are given a lecture about college entrance examinations.

Another important source of information is the *juku* teacher. *Juku* teachers collect the students' estimates of the scores they received on the tests and are able to provide students with a chart that indicates the distribution of scores for all students enrolled in *juku* of a particular company. Other students may receive the evaluation by payment of a fee. This information is especially helpful because the actual scores on the entrance examinations are sent only to the universities and not to the students themselves. Knowing this information, even though it may not be exact, places students in a better position to make decisions about universities to which they are most likely to gain admission.

Because the examinations are based on the content of the national curriculum, it is imperative that teachers in all schools cover the entire curriculum. This is made especially difficult because the examinations are given before the 12th grade is completed. Schools respond to these problems in several ways. Some schools may actually attempt to cover the entire high school curriculum in less than three years so that there will be time left over for preparing students for the college entrance examinations. Other schools offer extra classes during vacation periods in an

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effort to compensate for the lack of time to complete the entire curriculum. In some schools, where most students aim for the very top universities, classes are offered according to topic and university, so that there may be a course, for example, labeled Tokyo University/Humanities Course.

Role of Parents

The mothers said that their primary responsibility was to provide their children with a good environment for studying and to keep them in the best possible physical condition by preparing nutritious meals and keeping them healthy. Some parents helped their children determine which courses to take in junior high or high school, but not at the college-entrance level: "At this age, we have to leave it to them." Despite their lack of direct involvement, parents' high motivation for their children's success on the entrance examinations is obvious. A high score is a source of jubilation for the whole family; a low score is a source of gloom.

Conclusion

In general, most of the interviewees expressed some acceptance of the present educational system and the manner in which students gain access to higher education. Even so, there were serious criticisms of the college entrance examination system, mainly the reliance on the tests of students' ability to memorize and the unfairness that results from the inability of some students to obtain extra help in institutions such as *juku*. Despite some of the system's shortcomings, teachers, parents, and students acknowledged the fact that efforts are being made to improve the overall college-admission process and the entrance examinations. They expect that there will be more changes in the future. In contrast to an image of an over-zealous mother, the impression of parents' role among those who were interviewed was one of passivity. They rarely take the initiative with their children's academic lives, whether it is in the selection of high school courses or in attempts to help their children with the college entrance examinations. They frequently responded with statements such as "I don't know" or "I never thought about it" when asked about their understanding of the procedures for entering the university. Their non-involvement sounded as if they did not believe this was their job or that they would be expected to understand these procedures.

It seems likely that these positive responses to the present system characterize the parents and teachers, as well as the students themselves, when information is obtained from those who agreed to be interviewed, who have high aspirations, and who have a high probability of being admitted to one of the nation's top universities. Doubtless the reactions would be different if interviews were held with students who were not faring well in this system; that is, with students who believed they did not have a chance of being admitted to a prestigeful university, or who had no plans for entering a university after graduating from high school.

The United Kingdom

The British Educational System

Students in England, Wales, Scotland and Northern Ireland follow an orderly route through their school years. Compulsory education in Britain begins at 5 years of age and ends at 16; post-16 education continues only for highly academically proficient students. The British educational system is organized to serve the highly academic student well, but its rigorous path to university entrance leaves out a large percentage of the student population. In an attempt to serve all students better, a number of legislative changes were introduced in the Education Reform Act of 1988. These changes included the introduction of "schools of choice," the establishment of a national curriculum to be fully implemented by 1997, and a more coherent educational path for the nonacademic student. The impact of these and other changes will not be apparent for several years, and may not directly affect those students aiming for the top universities.

Primary and Secondary Education

Infant and junior schools offer primary education to children between the ages of 5 and 11; various types of middle schools offer secondary education to students until they reach age 14. In the past, students were given an examination at age 11 designed to sort them into two ability levels: about 20 percent went to Grammar schools, which served university-bound students; the rest went to Secondary Modern schools. Beginning in 1965, however, this system was largely replaced by Comprehensive schools, which serve all ability levels. Although a few selective Grammar schools still remain, currently about 90 percent of all 14-year-olds attend Comprehensive schools.

Beginning at 14 years of age, British students begin the course work that will largely shape their academic futures. It is at this age that they begin the two-year courses of study that culminate in the examinations given in June of the second year for the General Certificate of Secondary Education (GCSE). Among 16-year-olds, nearly three-fourths were enrolled in a full-time course of study in 1993 - 94; this percentage dropped at age 17 to slightly over half of the students and at age 18 only one in five remained in a full-time educational program.

The GCSE is part of a single examination system covering England, Wales, Scotland and Northern Ireland, and includes approximately 30 subjects. This two-year period of study is very important because the final grades on the GCSE examinations largely determine whether a student is able to proceed to the Advanced Level courses, which constitute the major gateway to a university education. Students planning to enter a university typically study 8 to 10 subjects throughout the two years; less academically inclined students study fewer subjects.

Final grades are based on course work as well as students' performance on the final examination. Generally, students must achieve a grade of C or above on five or more GCSEs (grades range from A to G) to advance to the next educational level. Only about a third of the 16-year-olds who take the GCSEs achieve this level of performance,

and of this select group about 80 percent actually begin Advanced Level course work. As a result, only about 25 percent of the students in this age group go on to post-16 education. The remaining 75 percent generally follow one of three paths: (1) they enter the employment sector; (2) they pursue technical or vocational courses; or (3) they return to school to retake their GCSEs.

The next level of accomplishment, which occurs between the ages of 16 and 18, is assessed by the Advanced Level General Certificate of Education (GCE). The Advanced Level GCE is a two-year course of study designed to prepare the most academically able students for university entrance. Students aiming for the top universities generally take A-level courses in three of the 30 possible subjects over the two years; thus it is widely acknowledged that breadth is sacrificed for depth of knowledge. The traditional A-level course, which is highly rigorous and specialized, is designed to qualify students for further specialization in their anticipated undergraduate degree areas. Among young people between the ages of 16 and 25 years in 1991, 29 percent had A-levels, 33 percent had GCSEs, 30 percent had attained neither of these qualifications, and 8 percent had enrolled in an institution of higher education.

In order to broaden the curriculum, Advanced Supplementary (AS) Examinations were introduced in 1987. They involve about half the work of A-level courses and are designed to increase the number of subjects students can study during the two years. (A student may choose to take two A-level and two AS-level courses instead of three A-level subjects.) However, the AS Examinations have not been widely accepted by students, teachers, or universities.

A-level students not only accumulate a high degree of knowledge in their chosen subject, but they also undergo a rigorous final examination of their ability to apply this knowledge. Both the course of study and the examinations are set by external Examination Boards, composed of professionals in education or with expertise in the relevant subject area. Students are typically tested at their own schools over a two- to three-week period during June of their second year. For each A-level subject there may be three or four examinations, each lasting two to three hours or even longer. Of the examinations, one is usually composed of multiple-choice questions; the others are in the form of long, open-ended essay questions, oral presentations, or laboratory demonstrations. Grading is done by non-partisan external examiners engaged by an Examination Board.

To qualify for university entrance, a student must achieve at least two or more passes at the A-level. Grades of A to E are given for each A/AS-level examination; points are then awarded for each grade. It is the total number of accumulated points that determines whether a student will be accepted into a particular university course or program.

Of the estimated 18-year-old population in 1992, roughly 21 percent of the students taking the examinations attained passes on two or more A/AS-level exams; of this group, however, only 55 percent, or only 12 percent of the 18-year-old population, went on to a 3- or 4-year university. The remaining students either sought employment, retook the A-level exams, or began vocational or technical courses. Although nontraditional routes to college entrance exist, especially for universities offering vocational courses, the highly academic A-level exams are the most important route to university entrance.

In 1993, the General National Vocational Qualifications were introduced in order to develop the skills and knowledge of students who intend to pursue a vocational course in areas such as business, engineering, and health care. The long-term aim is for half of the 16- and 17-year olds to take this test. Supplementing this effort, a National Vocational Qualifications Test for persons who are already employed but seek further training was introduced in 1988.

Universities

Britain has 49 universities; of these, 31 were established after 1945, while 6, called the ancient universities (including Oxford and Cambridge, jointly termed Oxbridge), were established between the 13th and 16th centuries. The universities offer both graduate and undergraduate education; the typical undergraduate is a full-time student who obtains his or her degree in three years. Students may also obtain degrees through one of Britain's 29 Polytechnics. The Polytechnics, which were established in 1966, have a more vocational or technical emphasis and are often linked with industry and business. As of 1993, the majority of the Polytechnics were awarded university status; they are now referred to as the new universities, with the original 49 universities being referred to as the old universities. In addition, Britain's Open University, which has no entrance requirements, enrolls 72,000 part-time undergraduates in correspondence and broadcasting courses.

Britain's universities are relatively small. The University of London, with nearly 40,000 students enrolled in its various colleges, is the country's largest residential university. Other than universities such as Oxford, Leeds, and Manchester, each of which enrolls approximately 10,000 students, the enrollment at the remaining universities seldom exceeds 2,000 or 3,000 students.

Because of the small size of the universities, most students are able to engage in small-group instruction. The tutorial style of teaching, in which a professor holds weekly seminars with one to three undergraduates, is a feature not only of Oxbridge, but of many of the old universities as well. Most of the old universities grant degrees based on a student's performance on examinations given at the end of the three-year period of study. A student's course work and performance on yearly or term examinations may also contribute to the final result, although this is more likely to be true at the new universities. Another unique feature of the British system is that students who are accepted to a university are entitled to both free tuition and a grant covering living expenses. Although this was designed to ensure that high-ability students have access to a university education regardless of income, the amount of the grant has been frozen in recent years, causing a financial hardship to some lower-income students.

Applying for Entrance

The application procedures for university entrance changed in 1993 because of the new status given to the Polytechnics. Apart from Oxbridge, there is now a single application form (UCAS) for both the old and new universities. The application form includes the following five parts: (1) the student's academic record, especially the grades received on the GCSE exams; (2) recommendations from the students' tutors, including projected grades on the A-level exams; (3) a one-page personal statement describing reasons for applying, hobbies, and other interests; (4) background information about the student and the student's family; and (5) a ranked list of eight universities to

which the student wishes to apply. The UCAS form must be completed by mid-December of the second A-level academic year. Teachers often help students with these forms and this project is a constant source of interest and activity in the last quarter of the calendar year.

The whole application process is somewhat of a gamble since students do not know their A-level grades at the time of application. As a result, they must exert great care in choosing the list of universities to which they apply. The forms are sent to a central clearing house and copies are issued to all of the universities chosen by the student. Promising candidates are interviewed by the universities and may be offered a conditional or an unconditional offer. A conditional offer is given when a student's acceptance is dependent on receiving certain grades on the upcoming A-level examinations; unconditional offers, given to those students the universities want most, are not dependent on eventual grades.

Grades are a crucial determinant of college admission. If grades are not acceptable, conditional acceptance is never granted; if grades turn out not to be sufficiently high, the conditional offer is revoked. A third factor that also influences the decision is the student's interests and skills, especially if they are seen to be a potential asset to the university. Entrance is granted to a particular academic department, such as physics or psychology, not to the university itself. (Entrance procedures differ for Oxford and Cambridge. Students may apply individually to either of these universities, but not to both, and they must decide the colleges within the university in which they would like to be enrolled.)

If students fail to get into the universities of their choice, their applications are sent to a clearing house, where their applications are matched against vacancies in university departments. Other options include repeating the A-level course in high school, taking the year off and trying again the following year, enrolling in private "crammers," or taking a job that is combined with a program that enables the student to do more vocational courses.

Reactions to the Entrance Examination System

Desire for Entering the University

All the parents interviewed were supportive of their children's decision to seek university entrance. Many parents saw the degree as a route to "more secure employment;" others said it "doesn't necessarily mean you will get a job." The latter made comments such as those of the following two parents:

a. I don't think going to college is important. I wouldn't pressure any of them if they didn't want to do it. They have a lot of fun; it's a good qualification which may or may not get them a job. It's a valuable experience - gets them away from home.

b. I used to think it was very important, a chance to think, to grow, to study something. Recently it's worse for the graduates. It is not a passport; it doesn't necessarily mean you will get a job.

General Satisfaction

Students generally explained that they thought the entrance procedure was fair. One parent called it "a good system but hard on the kids," but another complained that "people are pitted against one another; there is no room for the disadvantaged." Some teachers said that the narrow but focused curriculum served the universities better than

the students, although it did increase the likelihood that students who enter a university would leave with a degree.

The main concerns expressed by the interviewees centered around the system's over-reliance on examinations and the degree to which social class and ethnicity predicted university entrance. "If you are not good at examinations, you can mess up your whole future." This sentiment was voiced by many interviewees, since the highly academic A-level examinations form the main criteria for university entrance. Many also felt that too much weight was placed on the GCSE exams, since the only grades that appear on the college application form are the projected A-level grades. Criticisms of the GCSE examinations also dealt with the number of subjects covered. One student criticized them in this way:

> The GCSEs are a kind of fraud. You have to work so hard for the nine subjects, then they seem like nothing. You don't use them again. You go on to do three A-levels and the rest are lost.

Students from families in the professional and managerial sector are four times more likely to apply to and be accepted at a university than are students from families of lower socioeconomic status. In addition, working-class students who do apply for university entrance often have trouble coming up with the money needed for living expenses. Not surprisingly, then, of the small sample of students and parents interviewed, those from working-class backgrounds were less likely to view the system as fair. "There is no real support for poor families," said one parent. "Children are very expensive at that age. There is no grant to do A-levels. You can't afford to be poor."

The advantages held by middle-class students were not only related to finances; parents and students both expressed the belief that middle-class parents could help their children with their personal statements and by counseling them about their academic careers. Teachers pointed out that this belief is only partially correct, for teachers spend many hours helping students with these matters. Gender also affected the perception of fairness; many females saw their career choices as being restricted.

Curriculum

The A-level curriculum was generally regarded by students and teachers as both interesting and challenging. Students are expected to do three to four hours of homework a night for the A-level courses. In addition, the students meet with their form tutor once a week and also obtain help from their teachers. When the students were asked about their A-level subjects, they responded that they found them quite intellectually challenging and stimulating. They also thought they were quite difficult.

Some students and teachers were not satisfied with the GCSE curriculum. Students described the move from GCSE to A-level course work as a "great jump" and a "phenomenal gap." However, one reason for this perception may be that the GCSEs have become somewhat less focused in recent years in order to serve the school-leaver as well as the student progressing to the A-level. Thus, this may be a criticism of the adequacy of the GCSE examination as a foundation for the A-levels that follow, rather than of their adequacy per se.

Some teachers believed that the A-level syllabi were too packed. "There are big time constraints; too much material. People who get A grades must be slavishly adherent to an excellent teacher." Another teacher said that "there is not enough scope for the

students to develop their own knowledge" and "students who seek to understand the material can put themselves at a disadvantage." A third teacher said of the curriculum: "It is always challenging and stimulating; there are new ways of approaching the subject and it is demanding intellectually." However, most regarded the two-year A-level courses as very good preparation for university course work.

Fairness

In general, teachers said that the A-level exams are a "rigorous method of selecting students who have the ability to absorb large amounts of information." They suggested that the exams are "demanding and fair, though occasionally you get an unfair paper or question," and that "the exams are generally a fair test of what the students should know, and sometimes are quite ingenious." Teachers whose classes contained students of mixed social and ethnic backgrounds were more likely to be critical. There was agreement that the disadvantaged are not served by this system. The teachers suggested that the examinations are:

> not entirely fair to the number of students of this age who have difficulty sustaining themselves during the two-year A-level courses. The disadvantaged population is not served by this system, as they are not getting parental support. The amount of work is large and cannot be accomplished without a good background of support.

Another said, "People are pitted against each other, as if they all started at the same place" a condition that obviously is not met. There was a feeling, too, that Oxbridge and some of the older universities were elitist and students sometimes chose not to apply to these universities, not only because they did not believe they could get in, but also because they expected that they would not like their fellow students.

Difficulty

The consensus was that the A-level examinations were hard and that getting a high score depended on the student's knowledge. At the same time, both students and teachers complained that the GCSE examinations taken at 16 years of age did not adequately prepare the students for the level of difficulty or degree of commitment required for pursuing A-level course work, especially in mathematics and physics.

Limited Choices

Nearly all of the parents and students, but not all of the teachers, commented unfavorably on the limited choice of A-level subjects. The A-level system appeared to be geared toward those students, who, at age 16, had developed a very focused interest in a particular subject. Although the newly introduced AS-Level examinations were designed to alleviate this problem by increasing the number of subjects studied, most students did not take advantage of this opportunity. It was frequently suggested that 16 was too young to be "picking out a future career, when you feel like sitting on the fence not dedicating yourself to any one subject."

Factors Associated with Success

When asked which factors are associated with successful college entrance, responses included early preparation, the proper choice of university and degree, personal attributes, and work experience.

Early Preparation

Early identification of possible career choices and areas of interest was seen as being helpful. Many parents, however, reported a feeling of "not knowing how to help," and considered the counseling services offered by the schools not always to be effective. In fact, most parents and students did not think about university entrance requirements until GCSE subjects were actually chosen when the students were 14 years old. At this time students must identify possible career choices, for the courses chosen play an important part in preparing students for their later careers. Not only must a decision be made about whether to focus on the humanities or sciences, but specific courses must be chosen. If, for example, science is not chosen at this time, it is very difficult to take science courses at a later time.

Choice of University and Degree

Many of those interviewed said it was critical that students target the right universities by making full use of the ranking system on the UCAS form . Students are limited to two final choices. This leads to difficult decisions. One teacher asked, "Do they choose a very good university for the first choice, and an intermediate university as a back-up? Then they have to take the second choice if they fail to get into the first one." The top choices should represent a stretch for the student; the bottom choices (generally the new universities) should be more attainable. Additionally, many interviewees shared the sentiment expressed by one teacher that "science and engineering students can get in anywhere but the humanities and professional schools are oversubscribed. The competition is very fierce for those students."

Personal Attributes and Work Experience

Students' personal skills and talents often play a role, though not necessarily a decisive one, in determining university entrance. "If you can show you have wide interests in a lot of things, this is more appealing." Several students and parents also mentioned the importance of organized work experience or training, which most students undertook in the summer after taking the GCSEs. This experience was reported as being useful to students, for it provided work experience for their personal statements and also gave them relevant experience in choosing or rejecting particular careers.

Students, parents, and teachers also emphasized the importance of hard work as the means of attaining high scores on the examinations. Because parents and students think the examinations are difficult, "students cannot get away with studying at the last moment". In order to be successful, the students should, according to one parent, "have an extremely organized mind, but not be a workaholic." Teachers also emphasized strong self-motivation and good thinking skills. According to the teachers, the students must "show a genuine interest and enjoyment of their subject;" "they should think clearly, have good analytical skills, stamina, with the ability to sustain themselves through the course and work hard from the beginning." Other parents and students mentioned factors such as being able to take tests well and having good preparation, good early parenting, and high intelligence. A few mentioned creativity and imagination, but were divided as to whether this would be a help or a hindrance.

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Stress

Parents and students regarded a single assessment at the end of two years as particularly stressful and unfair, even though this assessment is often spread over multiple examinations. Although many students did not view the GCSE exams as excessively stressful, most assumed the A-levels were "going to be horrendous."

> If you are not good at examinations, there is a problem; two years of work could go down the drain in a matter of hours if you had a bad day during the examination.

Role of Parents, Teachers, and Schools

Most parents reported playing a minimal role in helping with their children's schoolwork; they perceived their role to be mostly supportive. One mother said that she did not have "the knowledge and expertise to help, and that worries me." Many of the parents had not attended university and, as one mother said, "I don't have a clue about the entry requirements." The parents saw themselves as helping their child by reducing chores, setting aside a quiet place to study, buying books, and providing financial support, rather than directly helping their child with the procedures involved in the university applications. In only one family was a tutor hired. This was considered to be most unusual.

Although most parents helped their children decide which GCSEs and A-levels to take, the actual process of gaining entrance to a university was generally left to the students and the schools. At school, students have both academic and form tutors. Academic tutors help students with A-level material; form tutors discuss general issues and act as guides to university entrance. Most teachers reported that parent-school interaction was minimal, but nearly all saw the students' success to be dependent on an implicit partnership between parents and teachers.

Teachers and schools seemed to play the major role in preparing students for university entrance. For example, mock A-level examinations are generally given in January and February of the second year. In these practice sessions, teachers describe the examination, show students how to "read" examination questions, and teach students how to pace themselves throughout the examination.

Generally, there was little communication between teachers and parents about college entrance. Parents went to their child's school, they said, to demonstrate interest in their child's education, rather than to obtain specific information. On the other hand, teachers were more likely to emphasize the importance of a partnership between parents and teachers in helping the student through this period of decision.

Conclusion

The British system of higher education is highly selective and specialized, and many students, parents, and teachers expressed discontent with some of its characteristics. First, because the Advanced-Level courses and examinations, the main determinants of university entrance, are taken by only a quarter of the population, the system effectively excludes the majority from post-16 education. Second, the standards set by these examinations are so high as to be called "the gold standard," enabling youth with strong academic interests to pursue a subject to a degree of rigor almost unequaled elsewhere. But there is a cost. Because students generally study only three subjects between the ages of 16 and 18, students have great depth of knowledge, but little breadth. Third,

students have to make early choices as to their future careers, often as early as 14 years of age. These three factors the elite nature of the system, its lack of breadth, and the major choices required at an early age were causes of concern among those interviewed. There was some discontent, too, with the types of persons selected by the examinations: "The universities don't really look at what kind of a person the student is. You end up with high fliers, such as doctors who are very clever, academic types, but who lack social skills."

Most agreed, however, that the students who do complete their university education attain a high level of knowledge in the subject which they concentrate their studies. After three years of study most British students complete their degrees and leave the university with the equivalent in terms of content mastered of a U.S. master's degree. Therefore, while the British system of higher education serves its top students very well, the majority of the student population is effectively excluded from university entrance. Thus, the goal as seen by many in Britain is to increase the number and diversity of students who are able to attain a university degree, as well as to develop more comprehensive programs for its non-academic students. Goals for training non-academic students by means of vocational courses and experiences are high and the success in meeting. These goals may lead to less discomfort with the system than has characterized British education in the past.

France

Prior to entering elementary school, all four- and five-year olds in 1994-95 and 99.5 percent of three-year olds in France attend nursery schools, which are free but not obligatory. Between the ages of 6 and 16, however, everyone must attend school.

Elementary and Primary Systems

The French educational system is divided into three levels: primary, secondary, and superior. Primary school (*e'cole e'le'mentaire*) is for children ages 6 to11; secondary school is typically for 11- to 17-year-olds. Secondary school consists of four years of middle school (*colle'ge*) and three years of high school. In 1994–95, over 90 percent of the students at age 16 in France were in school, but only 70 percent entered the last year of high school.

Although tracking does not begin formally until after the ninth grade, some separation of students begins at the eighth grade, where four kinds of classes are offered: general, technical, preprofessional, and preparatory classes for the professional examination.

At the ninth grade, students enroll in one of three types of schools. Students interested in attending college enroll in academic high schools (*lyce'e*). These high schools are oriented toward the preparation of students for the *baccalaureat*, an examination given at the end of the last year of high school. Passing this "exit" examination has great significance, especially for students interested in pursuing further education. Responsibility for the *baccalaureat*, as well as for such things as determining and paying teachers' salaries, lies in the hands of the national government in France's highly centralized educational system.

Students who are interested in technical or professional training may enroll in technical high schools or in schools offering apprenticeship programs. In the technical high schools, students may study various types of engineering, industrial production, computer science, and management; social and health services; and dance and music. A professional *baccalaureat (baccalaureat technologique)* is administered at the end of the technical high school education. In 1994, 16 percent of the age cohort earned the professional *baccalaureat* and 36 percent earned the general *baccalaureat*.

Vocational high schools prepare students for employment. This is accomplished by a course of study in high school and an apprenticeship that begins in the ninth grade. Students can follow either one or both of two paths within the vocational schools. The first offers training in a specific trade, such as mechanic or beautican, leading to a diploma called the *Certificat d'Aptitude Professionel* (CAP). The second leads to the *Brevet d'Etudes Professionelle* (BEP), a general vocational certificate that provides a more extensive vocational background than the CAP. Many more students receive the CAP than the BEP. In 1995, for example, approximately 248,000 received the CAP, while 84,000 received the BEP. In contrast, over 281,000 received the general *baccalaureat*. Approximately 45 percent of the *lyce'e professional* students enter the workforce. However, in 1994, 17 percent reentered the academic track and 38 percent

began the two-year program of training that would lead to the *baccalaureat professional*.

The Academic Baccalaureat

During the years of secondary school, students must take one foreign language and must have instruction in philosophy, French, and mathematics. Most are also required to take history and geography. At the end of what would correspond to a sophomore year in American high schools, students must decide the subjects on which they wish to be tested in the *baccalaureat*, commonly called the *bac*. Their choices determine their academic schedules for the rest of their high school education.

Questions and topics for the examination are constructed by a committee composed of a group of university subject specialists, *lycee* teachers and school inspectors (local arms of the Ministry of National Education). The committee is also responsible for establishing the criteria for grading the examinations. Grading is done by teams of teachers throughout the country and if any problems in the grading are discovered, a small review committee evaluates the possibility that bias may have entered the grading process.

All students must take a four-hour French *bac* at the end of their junior year. This test taps the students' proficiency in the French language. It not only covers knowledge of literature, but also the students' ability to express themselves in French. In this test, students choose one of three types of essays. They can summarize a text and then write an essay or they can explain a text through an essay with three major themes based on the text. For the oral portion of the test, the student is given 20 minutes for preparation and then is expected to present a 15-minute discussion of a passage that has been studied during the previous year.

The total *baccalaureat* score combines the score from the French language *bac* with the student's score on the specialized *bac*, which is taken at the end of the senior year. Each of three specialized *baccalaureats* has a certain level of prestige. "General" *baccalaureats* have the greatest prestige and "technical" *baccalaureats* have the least. For example, the most prestigious is mathematics and the least prestigious are those oriented toward practical training for industrial jobs. In addition to the examinations offered in these fields, there are optional examinations, such as those dealing with ancient languages, computers, and dramatic expression. The goal in the examinations is to require the students to use their intellect in analyzing and synthesizing as much of their knowledge as possible in their answers to the questions.

The *bacs* are given to students across the country during the first three weeks of June. Although the *bacs* vary from relatively short oral examinations to four-hour written examinations, nearly all consist of a written test which always includes essay questions. The first test is in philosophy, followed by tests in the other areas; the last test involves an oral examination.

Results are usually available two weeks later. There are three types of outcome. Students may pass the examination; they may fail and have to wait to repeat the examination the following year; or they may obtain a sufficient number of points to enable them to take another examination immediately after they receive their *bac* score that will yield a sufficient number of points to complete the *bac*.

It is generally accepted that without successfully passing the *baccalaureat* examinations, jobs are difficult to find. For this reason, it is not uncommon for students who do not initially complete their *bac* to

repeat a year of secondary school. It is not imperative that students take the examination at the end of high school. Persons of any age can take the examination and they may take it as many times as desired. It is not necessary to be enrolled in school in order to take the examination, but registration for the test is not automatic for anyone who is not attending school.

In 1992, only 73 percent of the students who took the examinations received passing grades. The percentage ranged from 66 percent in economics to 83 percent in mathematics. Despite the fact that the mathematics test is perceived to be the most difficult, the percentage of those who succeed is higher, probably because only the best students attempt this examination.

Higher Education

After completing high school, French students must decide whether they will try to go on to advanced levels of study. There are three general types of higher education: universities, *Grandes Ecoles*, and technical institutes within universities. Of those who continue with their education, 85 percent enter a university, 10 percent attend France's *Grandes Ecoles*, and 5 percent go to technical institutes.

Universities

The first requirement for entering a university is to possess a *baccalaureat*. This forms the main basis for acceptance except at the more prestigious schools, where grades may also be considered. Recommendations are not used as a basis for this decision. Entrance to the top universities is getting increasingly competitive, both because the number of persons receiving the *baccalaureat* has increased and because universities are beginning to limit enrollment to persons who live in the region. Entrance to certain fields, such as law, political science, engineering, and medicine, is also highly competitive. Some types of schools, such as business schools, tend to be private; thus the family's financial status may be a primary determinant of a student's ability to enroll.

Approximately a quarter of the students in France enroll in a university: 54 percent completed the senior year in high school, and among these, 58 percent (in 1994–95) of the students passing the *baccalaureat* went on to enroll in a university. Students usually pay minimal tuition to the university and most study at one close to their home. In cases where students wish to concentrate on a specific subject that may not be well represented at a nearby university, they may travel to other parts of the country and attempt to enroll in universities known to emphasize those fields of study; however, this is not as easy as it once was, because some departments in universities are beginning to be selective in their admissions due to the large numbers of applicants.

The courses in which one enrolls at the university are primarily determined by one's area of concentration. While it is not necessary to concentrate on the field studied in high school, it is much more difficult to succeed in a field without this earlier preparation. The first year of university study is a time of high attrition. Universities are large and impersonal, and the examinations given at the end of the first year weed out many students.

After two years at a university, students may earn a degree called the DEUG (*Diplome d'etudes universitaires ge'ne'rales*). In addition, they have the option of earning a *licence* after three years and a *maitrise* after four years, degrees that are equivalent,

respectively, to the American bachelor's and master's degrees.

Grandes Ecoles

The *Grandes Ecoles*, literally translated as the "great schools," are highly selective, and admission to one carries a great deal of status. Not only do students receive free education in state supported *Grandes Ecoles*, they are also considered to be government workers and are paid accordingly.

There are several types of *Grandes Ecoles*, some offering concentrations in mathematics and engineering, but others offering concentrations in science, business, political science, administration, literature, and education. Admission is based on an additional entrance examination. Two to three years of study at a preparatory school after the *baccalaureat* are generally required in order to prepare for the highly demanding entrance examination. Those who succeed in graduating become members of a tightly knit network of individuals who maintain contact with each other during later years. Graduates of these schools typically form France's "elite," which includes many top political figures and heads of large corporations.

Changes in the College Admission Process

Changes in the French *baccalaureat* system were implemented in 1995. There are three general *bacs*, nine technical *bacs*, and a number of vocational *bacs*. The new system is designed to give students in the general *bacs* more options in choosing courses and to provide students in the technical *bacs* greater opportunities for practical training that would lead to better chances for employment after high school.

The three general *bacs* are in science, humanities, and economics and social science. All students choosing one of these general *bacs* will study French, philosophy, history, geography, and mathematics. Whereas in the past the students' courses were currently determined by the *baccalaureat* being pursued, the new system will allow greater flexibility in the choices of courses.

The nine technical *bacs*, many of them new to the system, were designed for students who wish to study industrial technology, laboratory technology, medical and social science, technology and science, hotel management, music and dance, applied arts, environment and agronomy, and farm produce. Students studying for the technical *bacs* follow the same program through the 10th grade as those preparing for the general *bacs*.

Reactions to the System

Lack of Information

A major criticism that came up repeatedly in interviews with the students was the lack of information provided by teachers and schools regarding options after the *baccalaureat*.

> We are not well-informed at high school about choices after the *baccalaureat*. Last week we had one hour of orientation and in the end we did not understand it all. If we were better informed, we could better choose a university or better fill out regulation forms and really choose what we want to do.

Instead, students often have to figure out for themselves what options they have.

> I am finding that there isn't enough specific information. That is to say that people are not informed about what

> happens after the *bac*. It takes initiative to inform yourself about school or what interests you as a profession. It's true that there are a lot of people who follow bad paths at their university and get their DEUGs and then realize that wasn't what they wanted.

Sometimes older siblings can serve as good sources of information: "I am lucky because I was given advice by my older sister who has already gone down the path - *bac* C, prep school, and then the *Grandes Ecole*. I know a little about how it works."

General Satisfaction

The overall system for gaining university entrance in France was perceived as fair by most of the respondents. Passing the *baccalaureat* is the main requirement, and students may enter almost any university they choose. As one parent said, "The university is good because everybody can go. It is more democratic."

The process for getting into the *Grandes Ecoles*, however, was viewed as much more competitive, since these schools admit only students with the highest levels of academic achievement. One parent commented:

> The *Grandes Ecoles* can sometimes be very selective. One has to be the best of the best at the intellectual level. There are *Grandes Ecoles* that are relatively expensive. That is the problem. The children that go the *Grandes Ecole* are those that come from the most well-off families, which is not fair. There are some that come from modest families, but this is more difficult.

The students did not seem to be especially concerned about the possibility that they would be unable to pass the entrance examination for the *Grandes Ecoles*: "If I didn't get into a *Grandes Ecoles*, too bad. For me it's not an enormous catastrophe. I would perhaps be a bit disappointed at not having my first choice. My goal is to find something I like to do. I could go to the university."

It is the case, however, that students who seek entrance to a *Grandes Ecoles* take a rather large risk. They must spend time and money during the years of preparatory school and even then they may not be successful in gaining admission to a *Grandes Ecoles*. However, students who are admitted seldom fail to graduate.

Curriculum

The curriculum, which is determined by the government, seems to challenge most students, but this was not universally true. One of the students complained that,

> I am trying to expand my horizons, but it is not so easy. I make an effort to cultivate myself scientifically, to read and review because we don't do that in high school at all. We do scholarly work, but don't venture very far from the program. You do the program for the *bac*.

There has been a close interplay between the *bacs* and the curriculum. The curriculum has been specifically aimed at providing students with the broad fund of knowledge necessary to pass the *bacs*, but the content of the *bacs*, in turn, has been directly tied to the curriculum. This relationship should change, however, as the educational reforms in the *baccaluareat* system become effective. Students will have a greater number of options in the courses they will take and the content of the *bacs* should be less closely tied to a specific array of courses.

Fairness

The students interviewed were not overly occupied with passing the *baccalaureat*: "The *bac* is fair in the sense that if you have worked all year you will pass." Nevertheless, almost everyone noted that although the *baccaluareat* seems to be a fair test, there is always the possibility that a student will fail due to nerves. One mother described the situation in this way:

> If the student worked regularly, then normally they'd get their bac. But it's a one-day exam and a precise moment and if the student doesn't feel well, then they could fail. That's a problem of all exams.

In general, most seemed to agree with the sentiment expressed by another mother: "Parents don't ask if the exam system is fair or not. They just worry about their children passing."

Some discontent was expressed about the unfairness that arises from the fact that certain *bacs* allow students more flexibility than others. For example, it is easier for those who complete the *bacs* in mathematics to change their concentration in the university to literature than is the reverse. All students must study a fair amount of literature in preparation for the French *bac*, but all students do not spend an equivalent amount of time studying mathematics. Additionally, in terms of specific examination questions, several felt that the section on philosophy was unfair. Even though these tests were graded by professors, as are all sections of the *baccalaureat*, the students complained that this section was often graded more subjectively than others.

There was also some concern that the *baccalaureat* examinations are being devalued because the new technical *bacs* are easier than they were a few years ago and should not be considered as a real *baccalaureat*. One of the teachers commented that "No one knows what the *bac* represents anymore in terms of level. In my opinion, it doesn't have the same value it did a few years ago. But in any case, if you don't have one you are stuck."

There was concern, too, that the percentage of students passing the *bacs* differs according to the region of the country, the family's socio-economic status, gender, and the school in which the student is enrolled.

Factors Associated With Success

Generally, the factors that were believed to contribute to successful completion of the *baccalaureat* are the same as those that contribute to successful college admission: hard work, motivation, and good preparation. Many respondents commented that the examination favors those students who work systematically and who can remain focused and calm. As one student said, "Success is based on a delicate balance of working hard without getting too stressed. The most important factor is to be calm."

There was general agreement that students who complete their schoolwork should be able to pass the *bac*. The curriculum for the French academic *lyce'e* is designed to prepare students for this examination. Therefore, work done during the course of the year should provide students with a good foundation.

Another important factor is the parents' ability to get their child enrolled in the right *lyce'e*. Students must enroll in the neighborhood *lyce'e*, but if the *lyce'e* is not of high quality families must try to enroll their children in a *lyce'e* of another neighborhood. The only way that they accomplish this, however, is to demonstrate that their child

has a special curricular need that can only be fulfilled by attending the alternative *lyce'e*.

Another approach taken by ambitious parents is to have the student take German as a first foreign language. Although English is considered to be more practical, German is considered to be more difficult. Because the students' schedules are determined by the language they take, and because the better students tend to take German, it is likely that this group of students will be made up primarily of good students. Thus, although students are not supposed to be tracked, decisions such as this separate students according to their level of ability and , in turn, according to the educational level of their parents.

Stress

The junior year in high school seems to be the time when most students notice schoolwork becoming more difficult. "There are a lot of students who suffer at that point because they aren't used to working. They have to realize quickly how to function and mobilize themselves," said one student. Since a student's primary goal is to pass the *baccalaureat* at the end of high school, most orient themselves toward this objective. Those students who wish to read and learn about other areas must generally search outside of their academic curriculum.

Most of the students who were interviewed for this study did not seem overly worried about the *baccalaureat*. This may be attributed to the fact that the interviews were held during the early months of the academic year; their stress may increase as the time of the examination approaches.

The teachers concurred with this evaluation and explained why some students might feel slightly stressed. "The students I have," said one of the teachers, "often are not stressed at all. Those who are a little stressed are those who didn't do their little exams and therefore are a little anxious."

More typically, French students are said to find the *baccalaureat* examination to be stressful, especially the parts in which they must respond orally. Even the students who were interviewed mentioned the stress associated with the oral examination, primarily because they were not familiar with this type of test. "I am more afraid of the oral exam," confessed one student, "I am afraid of speaking to someone I don't know. I think I will be stressed. I am naturally a little like that."

For parents, the years during which their children prepare for the *baccalaureat* are very stressful. They are anxious for their children to do well on the examination because that is the key to a more secure future. "During all this year everything is in preparation for the *bac*. One only thinks of that."

Role of Parents

Most of the parents interviewed did not seem to be directly involved in the college-admission process, but this could be due to the fact that their children were doing well in school. The parents did express a strong desire for their children to succeed and to find interesting jobs, a task that is difficult in France because of the high rate of unemployment.

Since the students interviewed in this study were all doing well, their parents trusted them to be responsible for themselves. "I don't do much because my daughter works very hard, very independently, and therefore I don't need to help her," said one mother. For the most part, the role of parents is considered to be purely one of support and encouragement. The father of one of the girls described his experiences during his

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daughter's junior year: "I was worried last year during the French bac and unfortunately I made her stressed. I know I did badly. I wanted to motivate her, but I did the opposite." He then went on to say that he has confidence that she would do well this year, but he did not want to tell her for fear it would cause her to lose motivation.

Parents who have a high level of education may be able to guide their students in ways that less educated parents cannot. One of the parents suggested that "Parents who lack the necessary education, don't know how to tell their children what to take and what to avoid. It is not easy for these parents."

Role of Teachers and Students

Teachers help prepare students for the *baccalaureat* through regular schoolwork. In addition, some teachers provide students with what is known as the "Bac Blanc." This two-day test simulates the real examinations, allowing students to familiarize themselves with the test format and to have experience in taking this type of test.

Because the French school system is designed to prepare students for the *baccalaureat*, it is not surprising that all the students felt that they were being prepared for the examinations through their regular courses. This preparation begins during the sophomore year and continues through the rest of high school. In addition to their regular schoolwork, most students also do extra exercises or reading. The amount of time that these students said they spent in actually preparing for the *bac* ranged from 30 minutes to 3 hours per day. A typical description is the following:

> I have lots of friends who have bought all sorts of things, books and all that to prepare, but I've never really used those kinds of things. I prepare by working on my school work. I don't prepare too much. I must prepare, at the most, one hour every evening.

Conclusion

Successfully completing the *baccalaureat* is the main requirement for entering French universities. Although the admission process for the *Grandes Ecoles* is much more competitive, most of the students, parents, and teachers judged the overall process for college admission to be fair. The academic high schools are oriented toward the preparation of students for the tests that will enable them to receive their *baccalaureat* degree. Because of this, students must develop activities outside of the high school if they are to extend the scope of their education. Furthermore, students must choose their areas of specialization at an early age and they complained that they often lacked the information necessary to make the wisest decisions when faced with this choice.

Those who suggested that there are problems with the college entrance system had few suggestions about how the system could be improved. Parents generally professed disengagement from the process of preparing their children for the examinations; nevertheless, they suggested that this time of preparing and taking the examinations placed great stress in the families. The highly capable students who were interviewed gave no indication of being worried about the possibility they might not pass the examinations.

One common recommendation was to make the value of the different *baccalaureats* more equivalent. Although various *bacs* carry different degrees of prestige, they all have accomplished the goal of indicating whether or not the student has successfully completed the high school requirements. Others

suggested making the *baccalaureat* a more general examination, allowing students to become more specialized after high school. In general, despite the suggestions for improvement, most of these high achieving students and their parents expressed satisfaction with the overall system for university entrance and regarded the present system as providing a solid education.

Germany

The division of Germany into western and eastern sections after World War II resulted in two different educational systems. West Germany continued the traditional system of German education, but the system in East Germany followed the Soviet model. The greatest difference between the two systems has remained the tracking practices. West Germany, with few exceptions, tracked students according to ability after 4th- grade, whereas East Germany only tracked after 10th-grade. With reunification in 1990, the school system in former East Germany was almost totally converted to the West German system, as was recommended by the Joint Education Commission formed in 1990. The goal of this conversion was to have certificates and diplomas that would be recognized throughout the nation.

Differences do exist among all German states in the organization and operation of schools. Although the Conference of the Ministers of Education of the States (KMK) formulates general educational policies, it grants a great deal of local autonomy to each state in the control over educational practices and organization. Rather than attempt to note all of the differences, it seems most efficient to describe the general outline of the system found most commonly throughout the country.

Elementary and Secondary Education

Prior to entering school, a very high percentage of three- to five-year old German children attend kindergarten. In 1989 around 75 percent of three-year-olds and over 80 percent of five-year-olds attended kindergartens. Enrollment is voluntary, and depending upon their economic status, parents pay varying amounts of tuition. Kindergartens are oriented toward social development of young children rather than upon training for later academic work. In addition to the regular kindergartens, school kindergartens (*Vorschule*) are available for six-year-old children who are old enough to attend primary school, but for one reason or another are judged not to be ready for first grade.

Primary School

School is compulsory between the ages of six through 18. All children enter school at the age of six and remain in primary school (*Grundschule*) for four years. The hours of primary school are shorter than those in many other countries. First-graders attend school only 20 periods a week; by third grade the number of periods has increased to 25 or 30.

The goal of the four years of primary school is to provide the basis for secondary education. This is accomplished through building basic skills in the core areas of reading, writing, and arithmetic, through fostering initiative, self-reliance, and social cooperation, and through increasing the joy of learning. Little emphasis is placed on competition and efforts are made to promote equality of opportunities during the primary school years. Nevertheless, the later opportunities for education that will be available to the child do depend on the child's performance in primary school.

Types of Schools

After completing primary school, students are enrolled in one of three tracks of secondary school. Depending upon the students' grades in primary school, their interests, the recommendations of their teachers, and the preferences of their parents, they are enrolled in a *Hauptschule, Realschule, Gymnasium,* or *Gesamtschule.* In some states an integrated *Hauptschule/Realschule* is also an alternative. Most states also offer the *Forderstufe,* a non-tracked orientation level for the fifth and sixth-grades.

Hauptschule

The most basic schooling is offered in the *Hauptschule,* which prepares students through the ninth year of schooling (10th year in some states). Admission is open to all students regardless of their previous academic performance and there are no final examinations in the *Hauptschule* of most German states. The curriculum of the *Hauptschule* includes 26 to 33 periods of classes a week in a German, English, mathematics, physics, chemistry, biology, geography, history, social studies, religion, art, music, physical education, and occupational studies.

The percentage of students attending *Hauptschule* has been in steady decline since World War II, from 79 percent in 1952 to 33 percent in 1991. These schools are now considered by some persons to be the last resort, schools for marginal and immigrant groups. Non-German children made up 20 percent of the student population in *Hauptschule* in 1991, as opposed to 5 percent of the students in *Gymnasium.*

Students who enter the *Hauptschule* in fifth grade may still change to another school form if their grades improve, although a transfer becomes harder over time as the curricular gap widens. Most students finish with a *Hauptschulabchluss* school-leaving certificate after the 9th or 10th grade. In 1992, 26 percent of the age cohorts received this certificate. These students must continue to attend some type of school on a part-time basis until they reach the age of 18. Some choose to attend a full-time vocational school. Most combine part-time attendance at school with an apprenticeship or with employment in public service. It is very difficult, but not impossible, for graduates of *Hauptschule* to achieve the university entrance qualification. Evening classes or full-time adult classes present alternative routes to university education.

Realschule

Realschule offer education for grades 5 through 10 (7–10 in some states) and are more advanced than *Hauptschule* in terms of the rigorousness of the curriculum. Students who have done exceptionally well in *Realschule* are able to transfer to a *Gymnasium* for the last three years of their schooling after 10th grade. A wide array of other opportunities is also available for students completing the *Realschule.* The great majority attend a part-time vocational school and obtain on-the-job training or find employment in a public service position. Others may choose to attend some type of vocational or technical school. Graduates of *Realschule* typically do not anticipate having professional careers, but they may qualify for additional education, which can lead to qualification for entering a technical college, or in some cases a general university. Since the *Realschule* offers students opportunities both for later studies and for future employment, it serves a dual purpose. In 1992–93, 24 percent of 14-year-olds attended *Realschule.*

Students in *Realschule* an choose to concentrate in one of three different areas: (1) mathematics, the natural sciences, and technology; (2) business and economics; or (3) creative and artistic endeavors, domestic science, or social studies. *Realschulen*, like *Hauptschulen*, offer between 30 and 34 class periods a week. The basic, traditional subjects such as German, mathematics, physics, and chemistry are generally taught for four periods each week, while others are only taught for two periods.

In some states, *Hauptschule* and *Realschule* tracks are offered in one school, called *Regelschule*, *Sekundarschule*, or *Mittelschule*. This is especially common in the new states of former East Germany, although some western states also offer this type of school. In 1992, 7 percent of 14-year-olds in Germany attended a combined *Hauptschule/Realschule*. Although students in this school type are in the same building, they are still officially tracked into either the *Hauptschule* or the *Realschule* part of the school.

Vocational School

Students who continue on from *Realschule* or *Hauptschule* to enroll in part-time vocational schools (*Berufsschule*) usually attend class once or twice a week for around 12 periods, although they may choose instead to go to classes full-time for a few weeks each year. Most of the classes are in vocational subjects devoted to specific trades; less attention is paid to general education. This is known as the "dual system," combining part-time schooling with an apprenticeship on the job site. Full-time vocational schools (*Berufsfachschule*), in contrast, require full-time attendance for one to three years, depending on the type of speciality being studied. Because students at these schools do not hold apprenticeship positions, more time is devoted to general academic training than is the case in the part-time schools. These schools specialize in subjects such as commerce, technical trades, home economics, tourism, and social welfare.

Participation in vocational training has seen a steady increase in the past 20 years, from 49 percent in 1975 to 73 percent in 1991 (Arbeitsgruppe Bildungsbericht, 1994). This has not corresponded to increased attendance at the lower school forms, *Hauptschule* and *Realschule*. Rather, students planning on attending the university are increasingly changing course before entering the university, or completing an apprenticeship before attending the university. In 1992, 25 percent of first-year students at general universities had completed vocational training. At technical universities (*Fachochschule*), 68 percent of entering students had completed vocational training.

Upon graduation, students with the *Realschule* leaving certificate may also qualify for admission to a technical institute (*Fachschule*), where they receive more advanced training for middle-level staff positions. Because of the importance of vocational training in the German educational system, efforts are being made to give greater emphasis to these schools and to make their status more equivalent to those devoted to general education.

Vocational extension schools (*Berufsaufbauschule*) seek to provide additional opportunities for training before or after on-the-job training begins. Technical high schools (*Fachoberschule*) provide two years of education, during which students specialize in engineering, industry, agriculture, social studies, or design. They lead to graduation with the *Fachabitur*, a certificate similar to the *Abitur* from the

Gymnasium. The main disadvantage to the *Fachabitur* is that it only allows students to study the subject they concentrated on during secondary school. Many graduates from technical high schools continue on to technical universities.

Gymnasium

The highest academic track at the secondary level is the *Gymnasium*. Students who perform well in the fourth grade receive a recommendation to attend *Gymnasium* in the fifth grade, where they encounter a curriculum that is much more demanding than the curricula of the other two types of secondary schools. The *Gymnasium* track, in contrast to the other two tracks, offers students nine years of education, including a six-year lower level (grades 5 through 10) and a three-year upper level (grades 11 through 13). Successful completion of the lower level at 10th grade allows students to enter the upper level of the *Gymnasium*, called the *Oberstufe*. In contrast to the declining interest in *Hauptschule*, attendance at *Gymnasium* has increased greatly during the recent decades, from 11 percent in 1952 to 30 percent on 1992 among 14-year-olds (Arbeitsgruppe Bildungsbericht, 1994). This increase has been accompanied by an effort to change *Gymnasium* from elitist schools to schools that serve a broader segment of the student population. The classical *Gymnasium*, with its emphasis on Latin, Greek, and other classical subjects, still exists, but the "modern" *Gymnasium* is vastly more popular. According to many critics, this has resulted in a decline in the quality of education offered at *Gymnasium*.

At the end of the second semester of the 11th grade of *Gymnasium*, students choose the subjects on which they will be examined for university entrance. During the last two years of *Gymnasium*, students must take a total of 28 courses, 22 at the basic level and 6 at the advanced level. They must also choose four subjects, two of which they will study in depth, from three general fields: language, literature and the arts; social sciences; and mathematics, sciences and technology. At least one subject must be chosen in each of these fields. Two subjects must be at the advanced (*Leistungskurs*) level and two at the basic (*Grundkurs*) level. For example, a student might study German and chemistry as the advanced courses and social studies, biology, religion, sports, and history as the basic courses. Another might study mathematics and biology as the advanced courses, and German, history, chemistry, sports, and art as basic courses. The content of the courses in each state is determined by the ministry of education of the state, but there is agreement among the states that the content must fall within the guidelines developed by the KMK at a national level.

Gesamtschule

In addition to the hierarchical system of secondary education represented by the three main types of secondary schools, an alternative type of school, the comprehensive schools (*Gesamtschule*), is also available in most states. Comprehensive schools represent a new approach which involves bringing together students with a broad range of talent and interests in a single school. Comprehensive schools seek to incorporate many of the features of the *Hauptschule*, *Realschule*, and *Gymnasium* in a comprehensive curriculum, while attempting to do away with the structural hierarchy of these three types of secondary school. Students enroll in the *Gesamtschule* between grades 5 and 10 and may then continue for three more years.

This approach has attained limited popularity. In 1992–93, only 9 percent of

14-year-olds in Germany attended comprehensive schools. Comprehensive school attendance varies greatly among states, however; states that have promoted this type of school have attendance figures ranging from 13–22 percent of 14-year-olds, while in states which have rejected it less that 1 percent are in attendance.

Forderstufe

Another type of school recently introduced in Germany is the *Forderstufe*. This type, also known as the "orientation level," provides non-tracked schooling for the 5th and 6th grades. Attendance varies between states, but the *Forderstufe* has gained a fair amount of acceptance. In 1992, 21 percent of all fifth-graders in Germany attended a *Forderstufe*. After the sixth grade, students are tracked into the other secondary school forms.

University Education

Higher education in Germany is free. At one time, any student who completed the course work in the *Gymnasium* and passed the high school exit examination (*Abitur*) was assured of admission to a university of the student's choice. This is no longer the case. The number of students attending *Gymnasium* and successfully passing the *Abitur* has increased beyond the number that can be accommodated at German universities. As a consequence, students no longer have the freedom of choice that was available earlier. Although some disciplines are still open to anyone with an Abitur, in many disciplines the student simply must wait for an opening at a university. For other disciplines, additional tests and interviews are necessary even before the student can be put on a waiting list.

In disciplines where federal or regional restrictions are placed on the number of students who can be admitted, grades on the *Abitur* play a very important role. For those disciplines, students must apply to a federal or regional agency that admits a limited number of students to each discipline. Depending on their scores on the *Arbitur*, the length of time the student has waited, and in some fields the student's score on a specialized test, the student will be offered admission when a vacancy arises, but not necessarily at the university the student sought to attend. For disciplines in which there are no restrictions, students can apply directly to the university itself.

It is possible to complete admission requirements for a university in non-traditional means. These alternative routes (*zweiter Bildungsweg*) require that adults enroll in evening schools at the *Realschule* or *Gymnasium* levels until they have met the requirements for graduation. The evening schools are open to persons who do not have the *Abitur* certificate, who are employed, and who have completed their vocational training or have worked for at least three years. Even after completing these years of study, however, the student must pass the *Abitur* examination in order to qualify for admission to a university.

Exit Examination

The Abitur

The *Abitur* examination is a curriculum-based examination, usually taken during the student's last year of *Gymnasium*. The *Abitur* exam itself consist of three written oral examinations. These examinations constitute 36 percent of the total grade represented by the *Abitur* certificate. The remaining 64 percent are derived from student's grades during the last

two years of *Gymnasium*. Although a total score of only 280 out of a total of 840 points is a passing grade, grading is relatively strict in these classes, and low scores are easy to come by. A high percentage of the students pass the *Abitur* examinations in recent years; approximately 95 percent of the candidates have passed the test. Most students who would not be able to pass the examinations are encouraged or required to leave *Gymnasium* before candidacy, either to shift to a lower school form, or after the 10th grade, when they already qualify for the *Realschule* certificate. In 1993, 17 percent of all *Gymnasium* students finished school without their *Abitur*, most leaving with the *Realschule* certificate after the 10th or 11th grade. Researchers estimate that 31 percent of the *Gymnasium* cohort which graduated in 1990 'failed' to reach the *Abitur*, because they were tracked to a lower school form or left *Gymnasium* with a lower school-leaving certificate.

Despite high failure rates in *Gymnasium*, the percentage of *Abitur* holders has continued to increase dramatically over the past 40 years. This has led to increased enrollments in German universities and restricted entrance in some fields. In 1991, 23.6 percent of the age cohort passed the general *Abitur* examination and of those, 69 percent planned to enroll in a university within the following two years. In the same year, 8.8 percent graduated with the *Fachhochschulreife*, which is a limited university entry qualification.

The *Abitur* examination is constructed by the educational ministry within each state. Questions are submitted by teachers and reviewed by a group at the ministry that is charged with the task of organizing the examinations. In addition to submitting the questions, teachers are also asked to provide a detailed analysis of what good answers should contain. Ideally, the questions should evaluate the students' knowledge of the facts, ability to analyze, and then to think beyond this to apply their ideas and to judge relevant and irrelevant information.

The *Abitur* consists of four parts, two written tests from the advanced level courses in which the student has specialized, one written test on an optional subject, and an oral test in one other optional subject. The students' teachers administer the test, while teachers from other schools are given the responsibility for grading it.

Questions at the advanced level are expected to be more demanding and to require greater knowledge and keener analyses than those at the basic level. In addition, the tests at the advanced level generally are longer (four to five hours) than those at the basic level (three hours).

This procedure is not without its critics, primarily those who point to discrepancies in the difficulty of the questions and in the sophistication of answers expected in different states. These critics suggest that because of the less demanding questions on some of the examinations, it is easy for students from some states to achieve high scores, thereby giving them an unfair advantage for admission to restricted areas of study. Another source of criticism is the reliance on the tests and school grades, with little attention being paid to the special abilities or accomplishments of the students or to letters of recommendation from persons who know the student well. This is partially due to budgetary limits on university spending for admissions offices, which are minimally staffed.

Although these criticisms have apparently failed to stimulate reform, two other critiques related to the *Abitur* are currently being discussed. First, there is dissatisfaction

with the length of the *Gymnasium* education. Some are concerned that German students are at an international disadvantage because students in other countries finish at an earlier age. A proposal to reduce the number of years from 13 to 12 is under consideration. Second, many are concerned with the degree of specialization possible in the *Abitur*, and suggest expanding the number of subjects in the examination from four to six. At present, students focus primarily upon the two advanced level subjects that will be tested in their *Abitur* examination, a practice that is considered to lead to an unnecessary degree of specialization during the high school years.

Preparation for the Examination

Two months before the time of the examination teachers discuss how students should prepare and provide them with examples of the types of questions that will appear in the examination. Because the questions are similar to those that are discussed in their daily classes, students are not required to think about the materials in a totally new way. Teachers often have afternoon sessions in which they go over previous examination questions and in many schools, students and teachers go on weekend retreats where the students are given practice examinations. Teachers also encourage students to practice answering examination questions at home. This is easily done, for examinations from previous years are available to the students.

Reactions to the University Entrance System

Need for Entering College

Despite the fact that the students were enrolled in programs designed to prepare them for admission to a university, neither they nor their parents regarded entrance into the university as a necessity. Mothers were consistent in de-emphasizing the critical importance of a university education. The comments of four mothers were as follows:

- It is not so that he *must* study at the university.
- It depends what her talents are and what she would like to do. For me it is not important that she necessarily study at a university.
- If his exam and overall grades are mediocre to poor, I would suggest he not go to a university. If he does well on the exam and has good grades, then I would encourage him.
- If she did not enter college, I would suggest that she do something where she could take advantage of her other talents. She would take a job at a bank.

The reasoning behind these comments is probably related to the opportunities for alternative careers provided by apprenticeships and vocational training. If a student chose not to attend a university or was not admitted, the possibility always exists of enrolling in some type of vocational or technical training program. In fact, efforts have been made recently to give greater prestige to vocational education. "For me," said one of the teachers, "a good craftsman is a thousand times better than a mediocre academic."

General Satisfaction

Discussions about the requirements and procedures involved in the *Abitur* examination indicated satisfied, if somewhat perplexed parents and students. There was general acceptance of the current procedures as being reasonable, but there was also recognition of the difficulties involved in

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attempting to correct some negative features of the current educational system.

The *Abitur* examination was viewed as flowing naturally from everyday schooling and as being a sensible means of evaluating students' aptitude for a university education. The comments of two of the teachers reflect this satisfaction:

> I would say that the system functions quite well. The students know what is expected of them, and so if they really want to study at a university they have the chance to get serious during the last two years at high school. I really don't see any other way that would be better.

> Of course, there is no perfect system. Small injustices are unavoidable, but all in all, the German school system can be called optimal. We prepare the students for the final exam, we have trial questions, some of them taken from exams from previous years. We have known the students for years; we know where their weaknesses are and will work on these. However, those measures are mostly not even necessary, since the students who are preparing for the final exams are good, solid students. They are adults with mature goals, confident and motivated. Don't forget, the German system offers alternatives to the *Gymnasium* which will qualify students to enter the university; for example, the so-called *Fachschulen*, and others. So there are many options available.

Students also gave positive evaluations of the *Abitur* requirements. They were especially positive about the fact that "from the beginning one knows what subjects one will be tested on." This, plus several other factors, reduces the worry that might otherwise be associated with taking these important tests. First, the tests were viewed as being similar to the kinds of daily exercises with which they had long experience. Thus, taking the tests did not require a type of skill different from that which had been involved in their regular school work. Second, by including both the test results and the grades for the last two years of *Gymnasium* in the total *Abitur* score, the test did not loom before them as the sole determinant of their future opportunities.

Students did complain that the whole educational system resulted in a narrow education: "For those subjects in which I will be tested, I think that it shows my knowledge. For those subjects I no longer have, as of last year, it shows nothing. It is not representative of my wide range of knowledge, but is very specialized." The restriction of the *Abitur* to only two central and two optional subjects results in specialization at too early an age, according to some of the students. Moreover, some students were disgruntled that they had to choose and study subjects for the *Abitur* that were irrelevant to their future course work at a university and to their career goals. For example, a student interested in medicine may be good at German and may decide to select that subject for the *Abitur* in an effort to get a high score, even though the subject has little relevance for medicine.

Another criticism, pointed out by parents, teachers, and students, was the failure of the entrance procedures to pay attention to the special aptitudes and talents of individual students. "There should be some way to take into account the talents of students for drama, arts, graphics, theater, and also students' interests. Not just grades." However, those who suggested that changes should be made had difficulty in describing ways in which these changes could be accomplished.

Mothers were less likely than the teachers or students to comment positively about the *Abitur* test requirements and their effect on university entrance, but at the same time they were resigned to the fact that no clear alternatives were apparent. A typical comment was "Because there are so many students who apply, the system has developed that way. It just has to be that way."

Although there was general acceptance of the examination system, this did not mean that all aspects of the students' education were considered to be satisfactory. A major concern, especially of the mothers, was the overcrowded universities. Because there were more students seeking admission to certain fields than could be handled, an admissions cut-off known as *numerus clausus* (NC) has been placed on entrance to certain fields. Mothers made few suggestions about how changes could be instituted: "I have no idea how one should solve the problem." "I wouldn't say that the system is so bad, with the exception of subjects that have *numerus clausus*. I can't say how one would change it." No one suggested that university facilities should be expanded. Rather, some mothers favored the alternative of making the requirements in these fields even more stringent. Three of the mothers commented as follows:

- As far as I am concerned, the scores could be even stricter so that only the really qualified students get to the university. The *numerus clausus* could also be more generally applied or in a stricter fashion; both of these measures could then eliminate overcrowding at the universities.
- I would like to see the *Numerus Clausus* be made even more difficult, because there are simply too many students who apply to the universities.
- Perhaps more entrance exams and a stricter *numerus clausus* is needed. The *numerus clausus* is perhaps a bit harsh, but I don't think it 's so bad when one sees how overfilled the classes are at the universities.

Students also complained about the procedure of requiring students to attend a university in which there was an opening, rather than allowing the student to enroll in a nearby university: "It is idiocy when one must move here to Munich from Hamburg and someone from Munich must go to Hamburg to study."

Fairness

Because the percentage of students who pass the *Abitur* is so high, there are few charges that the examination is unfair. The only unfairness that was mentioned resulted from the higher scores received by students in states where examinations are less difficult and standards for grading are lower than in other states. This means that students from these states have an unfair advantage in university admission, both in the examination and in their grades, over students from states with higher standards. In fact, because of differing standards among states, the central university admissions agency gives students from some states grade point handicaps, while others receive grade point bonuses. Teachers as well as parents pointed out this problem.

When asked whether or not the examination was fair, one mother said that students were responsible for their results.

> It rests on the shoulders of the student. By the time of the exam they are no longer children. It depends on the young people themselves whether or not they want to do well. If they want to do

well they can. They simply must have the will to do it.

She then discussed the problem of getting into university subjects with a score below the cutoff point:

> I don't know what he would do. If he really wants to study, he can wait. I have never heard of a case where a student who wanted to study wasn't able to.

Parents and students often suggested that a standardized exam might be more fair. Rather than allowing students to choose the subjects on which they would be examined, a common set of examinations could be prescribed by state ministries. A student made the following comments:

> One can choose the courses that one will be tested on in the *Abitur* test and so if a student is good in languages, they stop taking math and physics in the 12th grade. This means that one can achieve a good *Abitur* average, because one could concentrate on the subjects that one is good at, but this is no test of general knowledge. It has advantages and disadvantages. I think it would be better to have obligatory subjects like German and history, then everyone would have the same chance. There would be some subjects in which one would be proficient and others in which one would be not so proficient, and then one could compare *Abitur* test grades. But now you can't really compare. I don't think this is good.

Factors Associated With Success

Teachers and parents were very clear in expressing their belief that intelligence is not as important for the *Abitur* or for doing well in *Gymnasium* as is hard work, motivation,. and studying on a continuous basis. A typical response made by one of the teachers is the following:

Persons of average intelligence should be able to do well in the examination, and students who do not pass the examination do so for two reasons: they didn't try hard enough or there were personal problems at home. If the students cover the curriculum thoroughly they will have little problem in dealing with the material.

This theme was repeated by mothers. Success in the *Abitur*, they said, depends upon:

- Motivation, hard work, ability to concentrate, ability to endure, to put it together, to learn systematically.
- Interest in school; interest in learning and knowing; and stability in the household. But most importantly, interest in the material that is presented in school.
- Hard work. Motivation. The child's intellectual abilities. In that order.
- The atmosphere of the school. The ability of the teachers. The stimulation the child gets in the home.
- It depends on the character of the individual. One must learn to continuously study and work toward a goal. If this is done, then it should be no problem.

Students agreed with the importance of studying, but they placed somewhat more emphasis on intelligence than did the parents or teachers. The responses made by two of the students are typical:

> Mostly motivation. If one really wants to do well on the *Abitur* then one will be sure to study a great deal and get good grades. One must have a good outlook on school. One must see meaning in

school. So one does not learn for grades, but that one learns for understanding. One must like school to a certain degree. One must be intelligent. One must be able to work, to study. Also, one must be able to deal with stress. During important phases one may not simply say that they don't want to do it anymore. One must endure.

In subjects where a basis of knowledge is required and is built up over years like math or the languages, it is very important that one have a firm foundation and that one keep up with the work from year to year. In subjects like biology where a basis in this subject is not very important, one must simply work hard over the last two years. One must pay attention in class, but I think everyone does that, because they know the material is important for the *Abitur*. I think that one must be motivated. One must be ambitious and be sure that one sits down and does the work. When one does that, then one can do well.

Hard work did not extend to attending extra study sessions offered by the school. Teachers believed that the regular classes provided sufficient information for the students to do well on the examination, and they generally echoed the teacher who said, "The instruction within the school is absolutely sufficient."

Stress

There was a remarkable uniformity in the opinion that the *Abitur* was not especially stressful. Although some students said they experienced stress immediately before or during the examination, and for some students the oral examination was somewhat stressful, the *Abitur* examination was not especially stressful for most of the students. Two of the teachers summarized the attitudes in this way:

As far as I know, the oral exam is the most stressful for the students. In general, however, I would say that there is a certain amount of stress which comes with any test situation. I don't think that the stress level for the exit exam is at all overwhelming.

It depends on the character of the student. If one has done a fair amount of work over the two years, then there is absolutely no reason to be worried. If for one or two years one does very little work, then there is reason to worry. In my experience, it is seldom the case that they do not pass, if the students are mature and do the work. There are cases, but it's very rare.

Students agreed with the teachers' appraisals: "The stress is tolerable, since one has been aware of the increased workload and what is at stake during the entire final school year." Mothers also failed to find the examination to be a source of great stress.

I have not felt or heard from my daughter that it's stressful. She takes everything in stride. For many parents, however, the stress can come when it is time for the child to go to the *Gymnasium*, because it has become so important in German society to go to *Gymnasium*. Then I would say that grades become a concern for most parents in *Gymnasium*.

Mothers suggested, however, that they believed that the exit examination would be much less stressful than being required to take an entrance examination to a university where there is "a new atmosphere, with new demands, and many competitors." Others

thought that deciding what to study would be more stressful than taking the examination: "What is stressful is the choice of what to study. The question of whether or not one will be accepted at a university is not so stressful." Still another mother said: "I can imagine that it is stressful when the student isn't able to study the subject they really want to study."

Role of Parents

Mothers expressed little knowledge about the whole examination procedure. In their opinion, the only way they could contribute to their child's success in the examination was to provide a good home environment, make few demands on the student during the time of preparing for the examination, and to try to be as supportive and helpful in other ways as possible. In general, the mothers indicated a remarkable degree of confidence in the maturity of their children and their ability to make wise decisions. Apparently, parents of superior students such as those who were interviewed assume no role in helping their children prepare for the examination. The only parents who are worried about their child's progress are the parents of weak students.

Students agreed that parents showed little involvement or interference with their studying for the *Abitur*.

- They don't help me with my studies or anything like that. They try to make sure that demands on me around the house aren't too great, so I have time to study. I hope they will give me peace and quiet during my preparation. There are some books around the house which will help me in history, but I have to do the preparation myself.
- I don't talk with my parents so much about university. I think it's good that they don't interfere and allow me to choose what I want to do and that they are not against any career that I might choose. If I had questions, they would naturally help, but they don't try to influence me or say I must study architecture, you must—. And they don't know as much as I about the university system. In Germany, when one finishes high school one is old enough to decide for oneself.

Parents are able to assume the supportive, but non-intrusive role in part because of their attitudes about their high school student:

> She is an adult and responsible for her own life. We will of course help, if we are asked, but we are confident that she is going to handle such a situation perfectly fine and find an intermediate solution until she is admitted to the university.

Another mother said,

> We have never interfered. It is strictly his decision, since it is his future life at stake, after all. Nor are we involved in his school performance, unless we are asked for advice or help.

Conclusion

The German educational system is undergoing a period of great change as it seeks to modify educational practices in the former East Germany and to respond to the ever-increasing demand for entrance to universities and higher-level occupations. While the apprenticeship system for which German schools are known throughout the world is still thriving, questions arise about how to increase its prestige so that attending vocational schools is perceived as a satisfactory alternative to attending university, and not just an addition, to

attending university. There is also concern that the lower secondary school forms, *Hauptschule* and *Realschule*, are suffering continuing devaluation.

The exit examination given at the end of the 13th year of schooling is generally regarded as a fair and defensible means of selecting students for university entrance. The major difficulty is that passing the examination no longer assures the student of a place at the university of his or her choice and in the subject in which the student is interested. A common criticism of the *Gymnasium* is that, because of the *Abitur* examination, students must select two subjects to study in depth and two other subjects for less intensive study. This results in a narrower type of education than students might desire. Another source of irritation is the fact that students are sometimes sent to far-away universities because an opening exists in their subject. In some fields, depending upon the student's score on the *Abitur*, it may be necessary to wait for several years for such an opening to occur. This situation arises because students are accepted to study in a discipline rather than at a particular university.

German mothers display a surprising lack of information about the procedures required for college entrance. They place the responsibility for obtaining such information on their children and in general have great confidence in their children's maturity and ability to make wise decisions.

The states are given major responsibility for carrying out the curriculum and for developing and scoring the *Abitur* examination. A major concern about this policy arises in relation to the different standards adopted by various states, since reduces comparability among students. Scores on the *Abitur* examination are not necessarily comparable, nor are the grades in courses, the two contributors to the total *Abitur* score. Since this score is the basis for selecting students for numerous clausus subjects, students from some states have a more difficult time of meeting the criterion for admission than do students from other states.

No attention is paid to the special abilities of students in selecting them for admission to the university. As a result, there is always the risk that students who have achieved the required score for admission to a particular program may not have other qualities that are desirable for effective performance in that profession.

Another problem in the university admissions process is the fact that it disregards specialization in *Gymnasium*. Each student chooses two advanced courses for the *Abitur*, and thier choices are generally based on a combination of interest and strategic planning - the latter with the goal of obtaining the highest possible overall grade point average on the *Abitur*. Since admission is determined overwhelmingly by grade point average, theoretically someone who had concentrated in German and French in *Gymnasium* could achieve the grade point necessary to study biology, while a student who may be better in biology could have fallen short of the requirements. This can also result in some students spending vast amounts of time studying material that will be of no value in their university studies.

The German educational system currently faces several pressing questions. Some major concerns are increasing comparability of *Abitur* results between states; whether to reduce the years of schooling from 13 to 12 for the college track; correlating subject choice among students to the fields in which personnel are needed, rather than to fields

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with higher prestige; and improving the university admissions process to reflect factors beyond grade point average and test scores.

Summary

The purpose of this paper has been to review educational practices and policies related to high school exit examinations and university entrance examinations in four countries: France, Germany, Japan, and the United Kingdom, and to describe the reactions of students, parents, and teachers regarding these policies. The four countries are experiencing a common problem. Their universities, built to educate a moderate percentage of the population, are being asked to accommodate increasing numbers of students. Unable to increase the size of their enrollment without an expansion of their budgets, universities are left with two alternatives: restricting enrollments with the consequence that they become more elite institutions, or expanding enrollments with a resulting decline in quality of education. The first alternative is unacceptable to many citizens because it exaggerates hierarchical structure of societies, and the second is unacceptable to others, because it may water down the value of a university degree.

Not only are universities experiencing increases in the number of students seeking entrance, they have also been forced to cope with the fact that some fields are much more attractive to students than are others. It has not been sufficient, therefore, to adopt strategies for controlling admission to universities; they have had to find ways for selecting the most promising candidates for various fields of study.

These countries have relied on two mechanisms for responding to these problems. They separate students, sometimes at an early age, into an academic track and a vocational track. The age at which this decision is made varies widely. For the countries that route students into different paths during the early years, efforts are made to provide students with a strong academic component to their vocational training. When the decision is made later, the goal seems to be to provide a strong academic program before vocational training begins. Vocational students have opportunities to switch to an academic track, but this is not a common occurrence. Further differentiation of students enrolled in the academic track is based on scores obtained on exit or entrance examinations; admission to universities, as well as to particular fields of study, is strongly influenced by these scores.

Entrance and Exit Examinations

Entrance and exit examinations in these countries are based on a curriculum established by ministries of education at the local, regional, or national level. Rather than imposing some arbitrarily defined standard of achievement, the examinations are closely tied to what the students have studied in high school. Because teachers are aware of what students are expected to know in examinations, it becomes their responsibility to equip students with the information and skills needed to pass the examinations. These examinations typically include open-ended questions that require organization and application of knowledge, and oral examinations that require the students to express themselves verbally. A persistent question asked about the curriculum-based examinations is whether they take into account the characteristics that will be most relevant for the students

success at the university level and in their later careers.

Reactions to Examinations

Parents and the students themselves often professed ignorance of the procedures involved in admission to universities, with a resultant frustration on the part of students and passivity on the part of parents. Nevertheless, they generally gave the college entrance procedures a positive evaluation. Although they were satisfied that the examinations were fair, parents and students acknowledged that there were problems with the strong reliance on examinations. They were unable, however, to suggest more desirable procedures.

There was consistent agreement that the major determinant of success on the exit or entrance examinations is the motivation of the student to study in a consistent fashion. Parents indicated that they had little direct involvement in students' preparation for the examinations. This was the case even in the families interviewed, where academic training is stressed and the parents had above-average amounts of education. Parents explained that the major way in which they helped their children was through providing a psychological support and physical environment conducive to study rather than by becoming directly involved in offering academic assistance.

Students reported that they did not find the examinations especially stressful. Because they were aware of what they should know in the examinations, they were able to reduce the possibility of stress by adequate preparation. Stress was also reduced when their high school exit scores did not depend solely on the examination, but also included consideration of their grades.

Criticisms of the Examinations

Although the examinations were considered to be fair and of high quality, two major problems were pointed out. Because the examinations often cover only a few subjects, students may graduate from high school with little breadth of knowledge, even though they have great depth of knowledge in a few subjects. This tendency is heightened when early specialization according to field of study is required.

A second problem arises when regional rather than national examinations are used. Inequalities among students within or between regions of a country occur when there is neither a national curriculum nor national guidelines. Students perceive this as being unfair, especially if there are differences among the regions of the country in terms of the quality of high school education and in the rigor with which the tests are scored. As a result of these regional differences, students with high scores derived from lower standards may be less qualified for admission to universities than students from other regions that have higher standards.

Members of all four societies also commented on the inequalities resulting from differences in the social and economic status of the students' parents. Middle-class parents with a good education are able to provide economic, personal, and intellectual advantages that are not readily available to students from less privileged families. Students from poor families lack access to tutors, books, and other academic resources at home, and their parents are not sufficiently knowledgeable about academic matters to offer their children guidance and counsel. As a result, these students often sit for the examinations with less information and fewer skills than do those from more privileged homes.

Respondents also questioned the wisdom of relying on test scores or on a combination of test scores and grades as the criteria for admission to universities. In order to maximize their likelihood of receiving a high score on the examinations, students may concentrate their studies on subjects in which they have special strength rather than direct their efforts to subjects which are more relevant to their career goals. Respondents also pointed out that reliance on test scores and grades also fails to give consideration to students' skills and talents which may be important in their professional lives, but may not be directly related to academic course work.

Finally, questions were raised about the desirability of requiring such early decisions about career paths. This problem is more characteristic of the European countries than of Japan, but in all four countries the system is relatively inflexible. Once the decision is made to follow the academic or vocational track, it is difficult for students to modify their studies so that those in the vocational track can become competitive for entrance to a university.

Conclusions

Procedures adopted for admission of students to universities have ramifications for a country's total educational system. It is inevitable that parents should consider the type of junior high school that will lead to an appropriate high school, or the type of elementary school that will prepare the student most effectively for admission to a junior high school. Although policy makers in all four countries have attempted to establish an egalitarian system of elementary school education whereby all children receive a comparable level of education, high schools are highly hierarchical in that the curricula differ according to the track in which the student is enrolled.

It seems likely that efforts will be made to attract larger numbers of students vocational training programs in the coming decades. The need for physicians, lawyers, teachers, and other professionals cannot grow as fast as the number of students who seek entrance to these professions. Efforts have been made to raise the prestige and economic status of vocational programs and thereby attempt to attract a higher percentage of students to vocational tracks. Even so, it seems likely that the number of students selecting the vocational track will continue to lag as long as the economic and social advantages of possessing a university degree persist.

The reactions and evaluations made by the respondents in this study represent the views of special groups of students in each country, students who have done well in school and who seek entrance to their country's leading universities. It would also be of value to know more about the response of less successful students and of students who do not aspire to a university degree. In developing policies that govern entrance to universities the reactions of these groups must be heard.

Endnote

1. In Japan, interviews were conducted in Tokyo and Hiroshima with eight 12th-grade students, 10 mothers, 8 of whom were mothers of the students interviewed and 1 father of the students; and 8 teachers from the high schools attended by the students. The teachers taught mathematics, English, science, or social science courses. The students, four boys and four girls, were concentrating on liberal arts or professional-oriented subjects (law, engineering, or medicine). Additional information was obtained from a professor of educational psychology and the director of the College Management Research Inc.
2. In the United Kingdom, interviews were conducted in London and in the Isle of Wight area with nine 12th-grade students, (four from humanities and science and mathematics, four from science and mathematics, and one from humanities); six mothers and three fathers; and six teachers (two from humanities and four from science and mathematics).
3. In France, interviews were conducted in Paris and in the region of Cannes with one boy and seven girls preparing for *bac*, all of whom were anticipating professional careers ranging from television journalist to judge. Three of the students' mothers, one father, and two teachers were also interviewed. The students consisted of one boy and seven girls.
4. In Germany, interviews were held in Munich and Furstenfeldbruck with seven senior students, seven of their mothers and one father, and with five of their teachers. The teachers specialized in languages, history, mathematics, physics, physical education, and computer science. The students were concentrating on mathematics, science, Latin, English, biology, chemistry, and economics.

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